FIG. 1

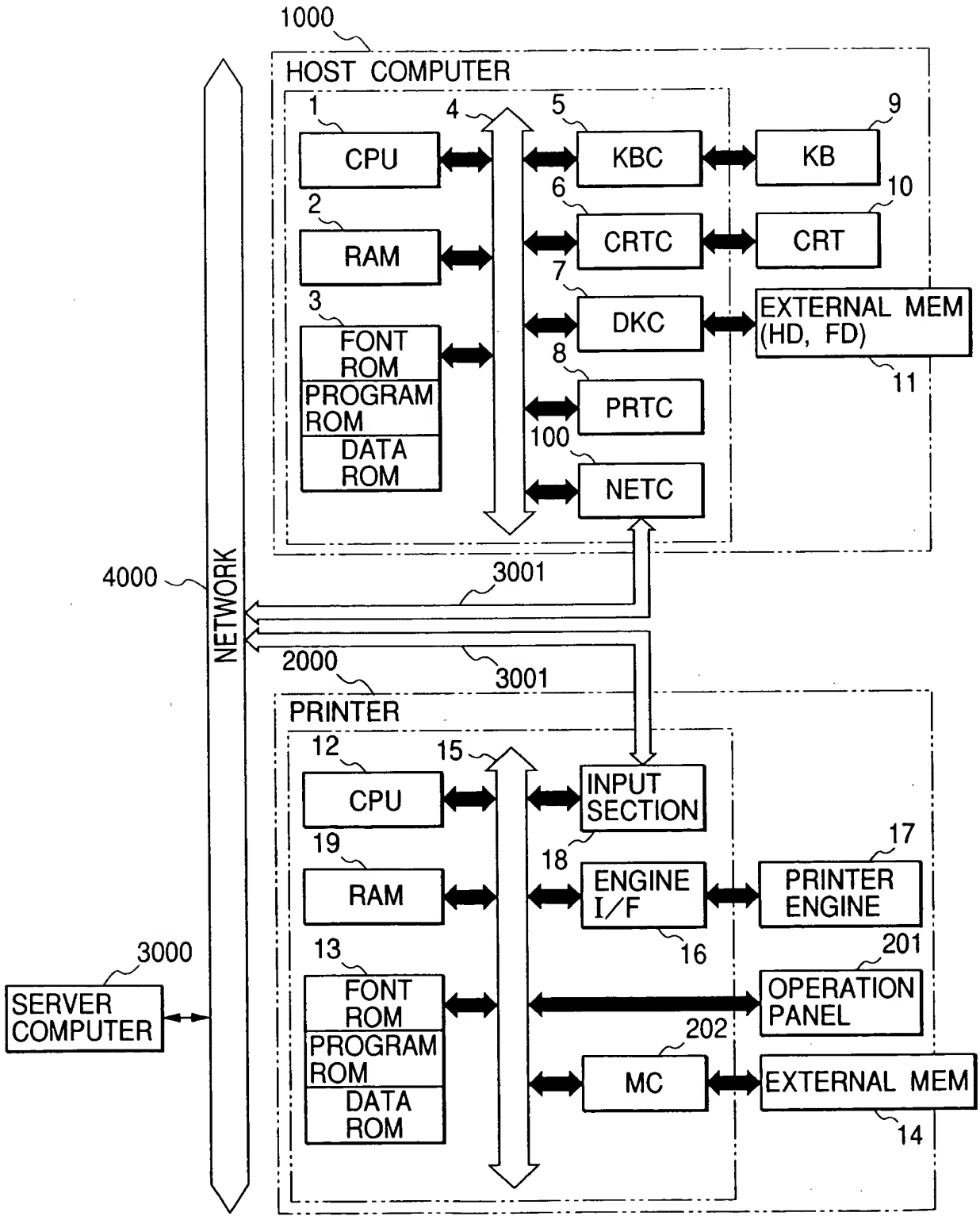

1000
HOST COMPUTER
1
CPU
2
RAM
3
FONT ROM
PROGRAM ROM
DATA ROM
4
5
KBC
9
KB
6
CRTC
10
CRT
7
DKC
EXTERNAL MEM (HD, FD)
11
8
PRTC
100
NETC
4000
NETWORK
3001
3001
2000
PRINTER
12
CPU
15
INPUT SECTION
19
RAM
18
ENGINE I/F
17
PRINTER ENGINE
16
13
FONT ROM
PROGRAM ROM
DATA ROM
201
OPERATION PANEL
202
MC
EXTERNAL MEM
14
3000
SERVER COMPUTER

FIG. 2

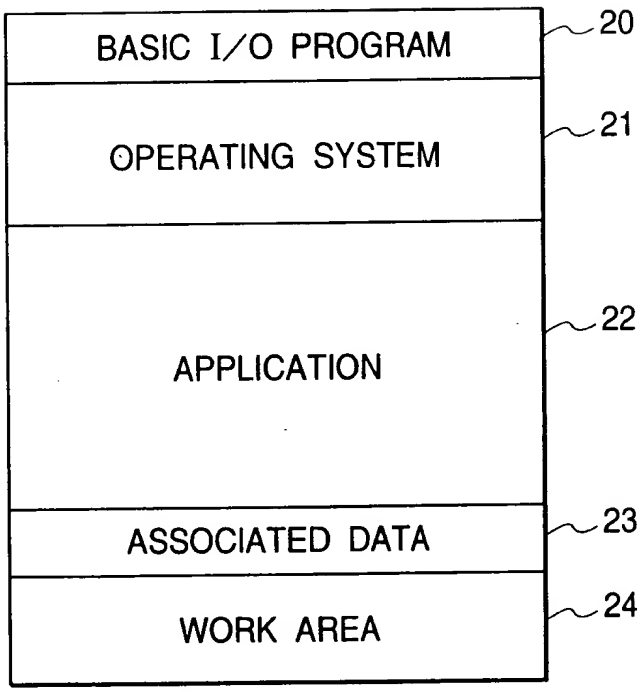

BASIC I/O PROGRAM
20
OPERATING SYSTEM
21
APPLICATION
22
ASSOCIATED DATA
23
WORK AREA
24

FIG. 3

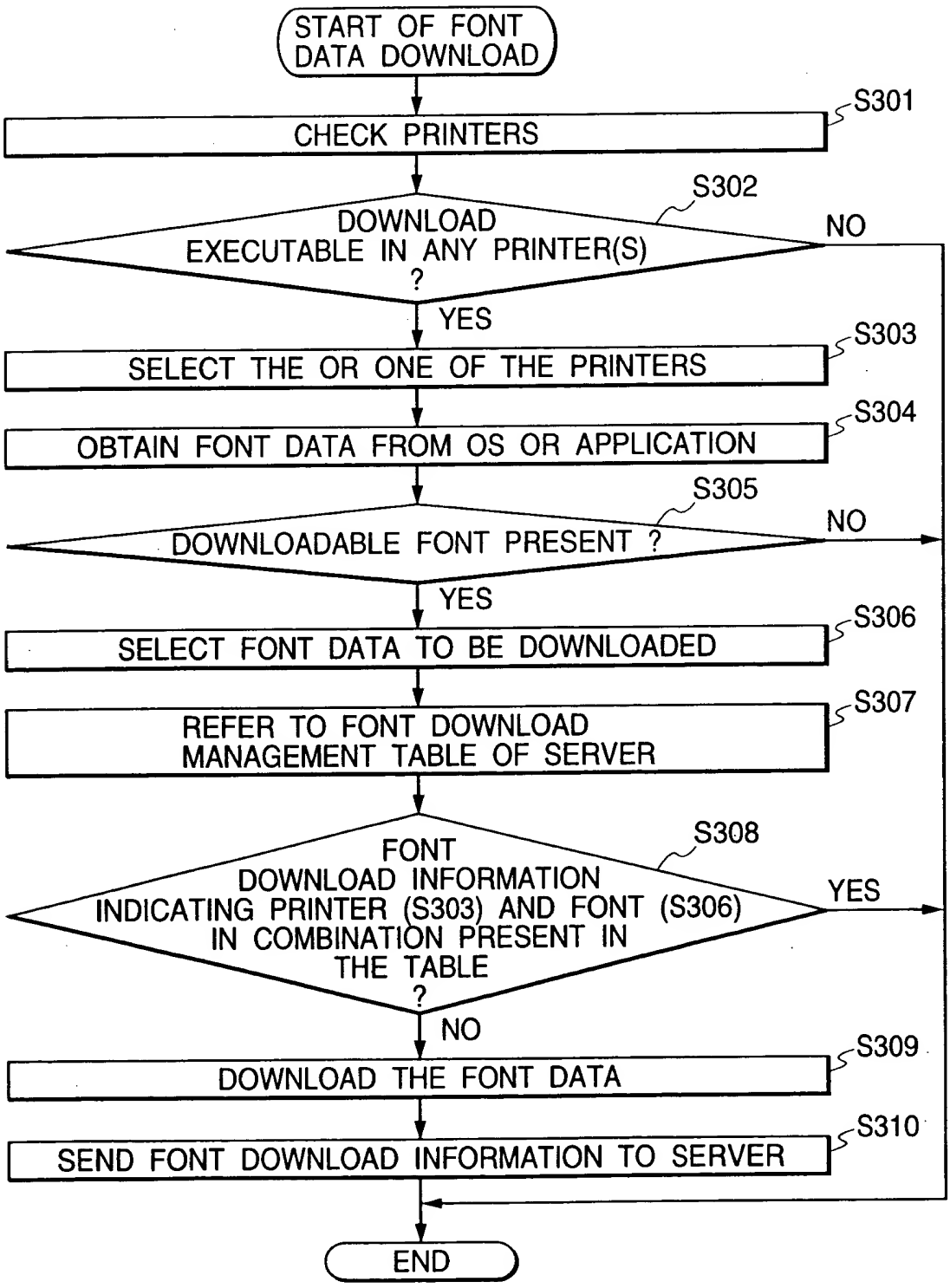

START OF FONT DATA DOWNLOAD
S301
CHECK PRINTERS
S302
DOWNLOAD EXECUTABLE IN ANY PRINTER(S) ?
NO
YES
S303
SELECT THE OR ONE OF THE PRINTERS
S304
OBTAIN FONT DATA FROM OS OR APPLICATION
S305
DOWNLOADABLE FONT PRESENT ?
NO
YES
S306
SELECT FONT DATA TO BE DOWNLOADED
S307
REFER TO FONT DOWNLOAD MANAGEMENT TABLE OF SERVER
S308
FONT DOWNLOAD INFORMATION INDICATING PRINTER (S303) AND FONT (S306) IN COMBINATION PRESENT IN THE TABLE ?
YES
NO
S309
DOWNLOAD THE FONT DATA
S310
SEND FONT DOWNLOAD INFORMATION TO SERVER
END

FIG. 4A

PRINTER NAME	FONT NAME
LBP-1	MING TYPE A
LBP-1	GOTHIC A
LBP-2	MING TYPE B
LBP-3	SCHOOL TEXT TYPE A

FIG. 4B

PRINTER NAME	FONT NAME
LBP-1	CURSIVE TYPE A

FIG. 4C

PRINTER NAME	FONT NAME
LBP-1	MING TYPE A
LBP-1	GOTHIC A
LBP-1	CURSIVE TYPE A
LBP-2	MING TYPE B
LBP-3	SCHOOL TEXT TYPE A

FIG. 5

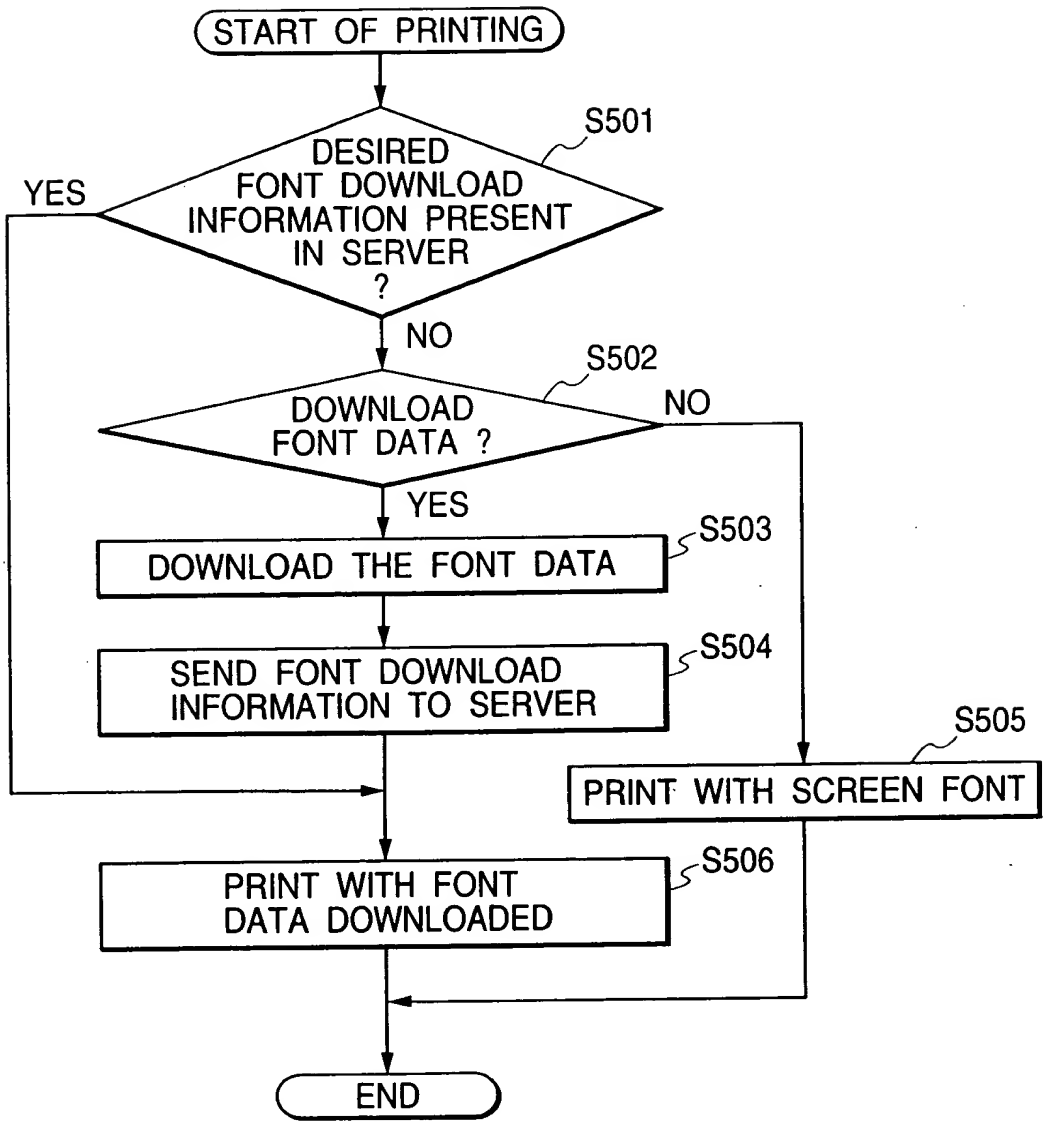

START OF PRINTING
S501
DESIRED FONT DOWNLOAD INFORMATION PRESENT IN SERVER ?
YES
NO
S502
DOWNLOAD FONT DATA ?
NO
YES
S503
DOWNLOAD THE FONT DATA
S504
SEND FONT DOWNLOAD INFORMATION TO SERVER
S505
PRINT WITH SCREEN FONT
S506
PRINT WITH FONT DATA DOWNLOADED
END

FIG. 6

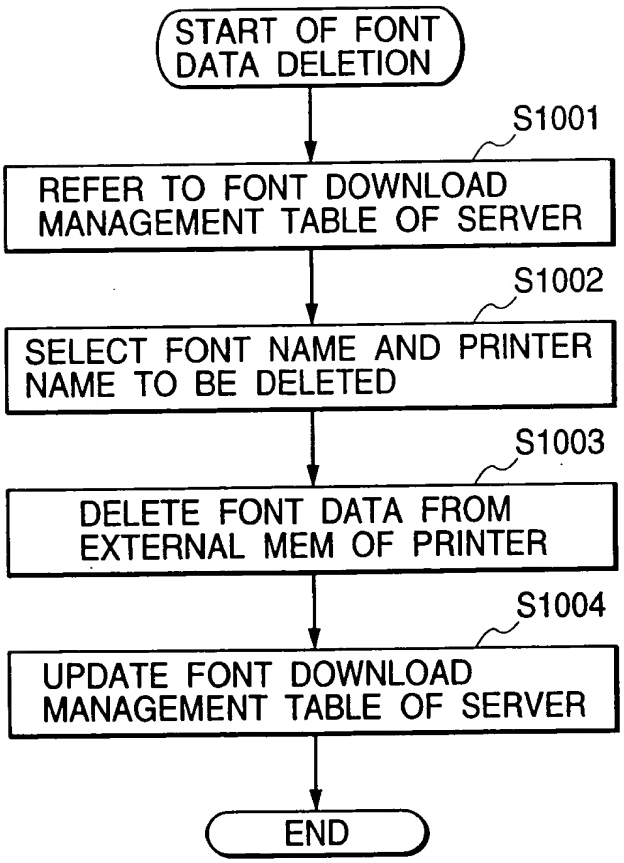

START OF FONT DATA DELETION
S1001
REFER TO FONT DOWNLOAD MANAGEMENT TABLE OF SERVER
S1002
SELECT FONT NAME AND PRINTER NAME TO BE DELETED
S1003
DELETE FONT DATA FROM EXTERNAL MEM OF PRINTER
S1004
UPDATE FONT DOWNLOAD MANAGEMENT TABLE OF SERVER
END

FIG. 7

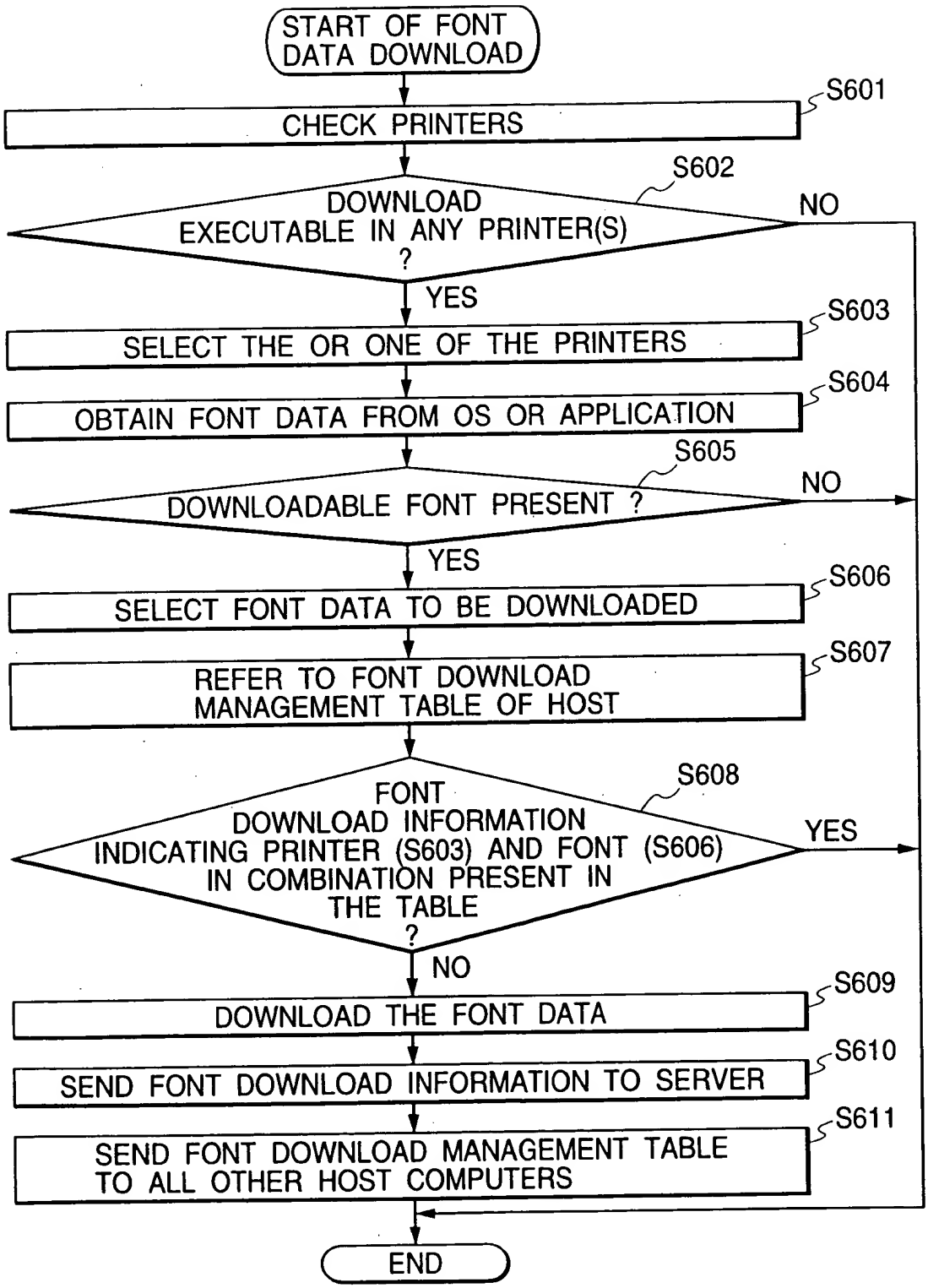

START OF FONT DATA DOWNLOAD
S601
CHECK PRINTERS
S602
DOWNLOAD EXECUTABLE IN ANY PRINTER(S) ?
NO
YES
S603
SELECT THE OR ONE OF THE PRINTERS
S604
OBTAIN FONT DATA FROM OS OR APPLICATION
S605
DOWNLOADABLE FONT PRESENT ?
NO
YES
S606
SELECT FONT DATA TO BE DOWNLOADED
S607
REFER TO FONT DOWNLOAD MANAGEMENT TABLE OF HOST
S608
FONT DOWNLOAD INFORMATION INDICATING PRINTER (S603) AND FONT (S606) IN COMBINATION PRESENT IN THE TABLE ?
YES
NO
S609
DOWNLOAD THE FONT DATA
S610
SEND FONT DOWNLOAD INFORMATION TO SERVER
S611
SEND FONT DOWNLOAD MANAGEMENT TABLE TO ALL OTHER HOST COMPUTERS
END

FIG. 8

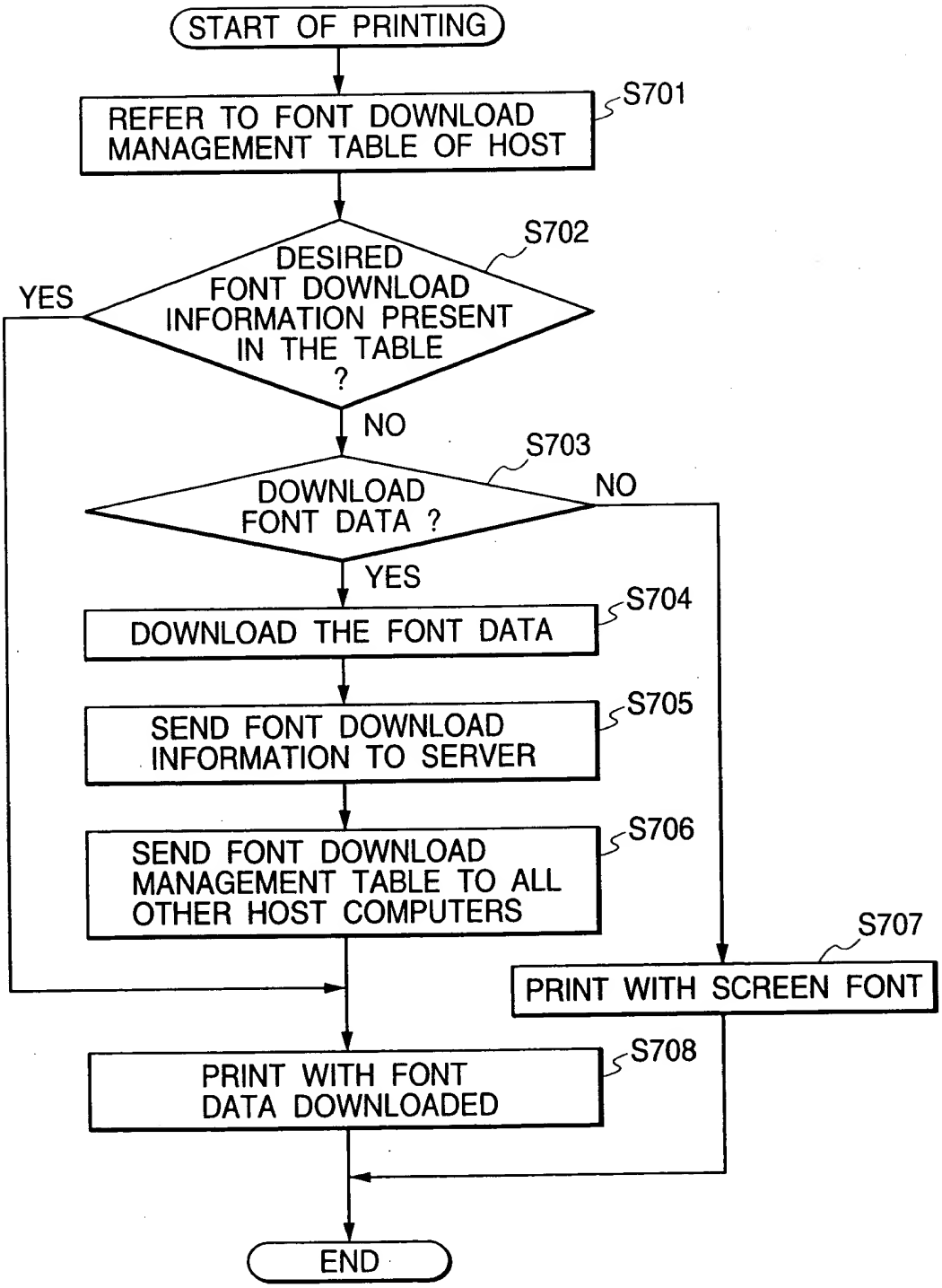

START OF PRINTING
REFER TO FONT DOWNLOAD MANAGEMENT TABLE OF HOST
S701
DESIRED FONT DOWNLOAD INFORMATION PRESENT IN THE TABLE ?
S702
YES
NO
DOWNLOAD FONT DATA ?
S703
NO
YES
DOWNLOAD THE FONT DATA
S704
SEND FONT DOWNLOAD INFORMATION TO SERVER
S705
SEND FONT DOWNLOAD MANAGEMENT TABLE TO ALL OTHER HOST COMPUTERS
S706
PRINT WITH SCREEN FONT
S707
PRINT WITH FONT DATA DOWNLOADED
S708
END

FIG. 9

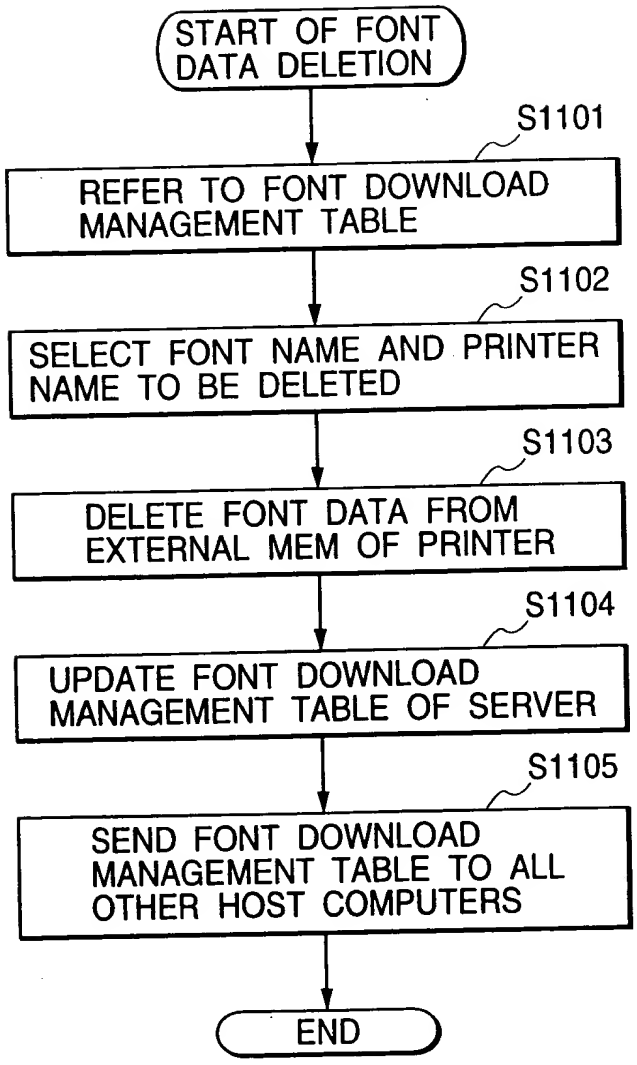

START OF FONT DATA DELETION
S1101
REFER TO FONT DOWNLOAD MANAGEMENT TABLE
S1102
SELECT FONT NAME AND PRINTER NAME TO BE DELETED
S1103
DELETE FONT DATA FROM EXTERNAL MEM OF PRINTER
S1104
UPDATE FONT DOWNLOAD MANAGEMENT TABLE OF SERVER
S1105
SEND FONT DOWNLOAD MANAGEMENT TABLE TO ALL OTHER HOST COMPUTERS
END

FIG. 10

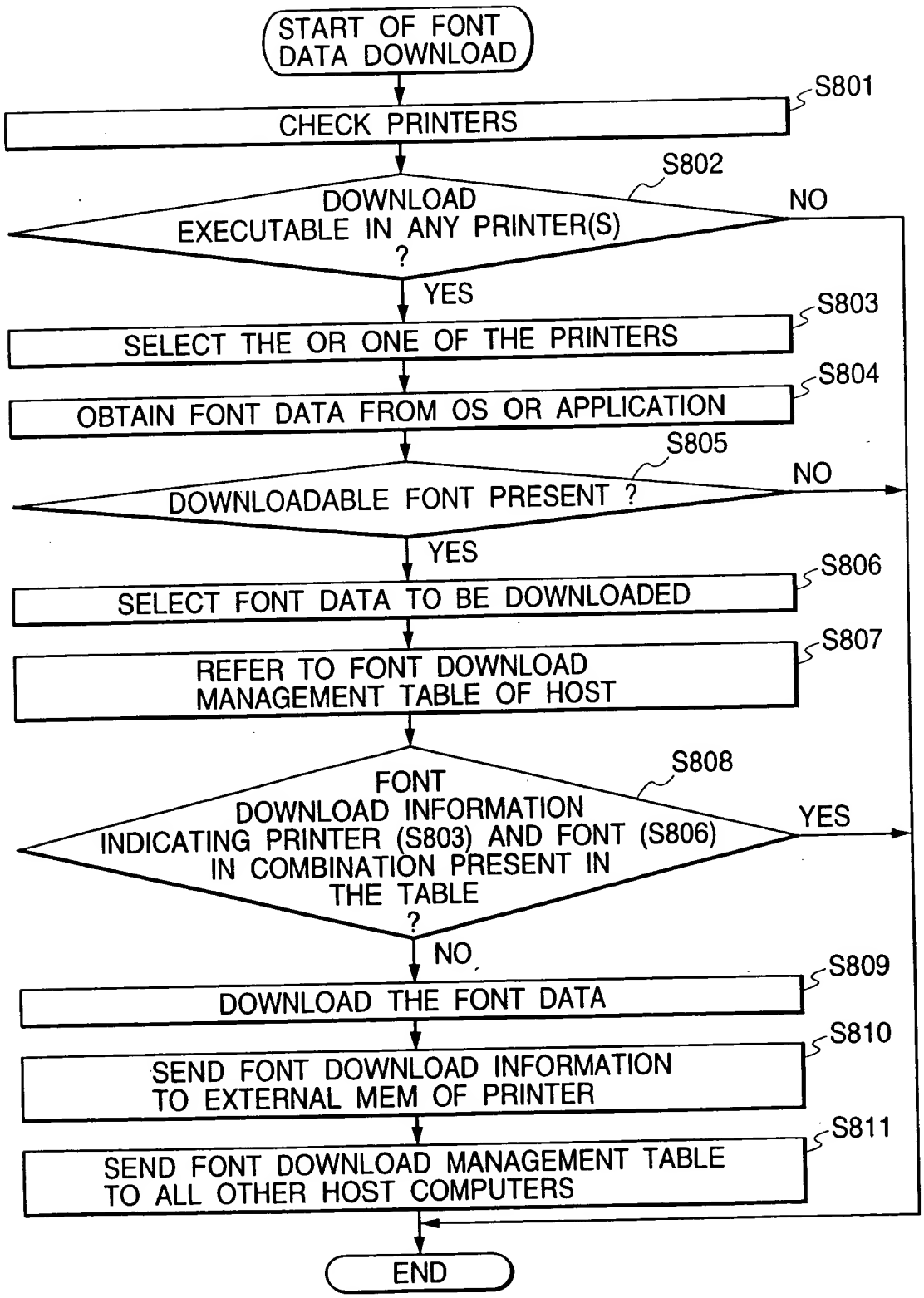

START OF FONT DATA DOWNLOAD
S801
CHECK PRINTERS
S802
DOWNLOAD EXECUTABLE IN ANY PRINTER(S) ?
NO
YES
S803
SELECT THE OR ONE OF THE PRINTERS
S804
OBTAIN FONT DATA FROM OS OR APPLICATION
S805
DOWNLOADABLE FONT PRESENT ?
NO
YES
S806
SELECT FONT DATA TO BE DOWNLOADED
S807
REFER TO FONT DOWNLOAD MANAGEMENT TABLE OF HOST
S808
FONT DOWNLOAD INFORMATION INDICATING PRINTER (S803) AND FONT (S806) IN COMBINATION PRESENT IN THE TABLE ?
YES
NO
S809
DOWNLOAD THE FONT DATA
S810
SEND FONT DOWNLOAD INFORMATION TO EXTERNAL MEM OF PRINTER
S811
SEND FONT DOWNLOAD MANAGEMENT TABLE TO ALL OTHER HOST COMPUTERS
END

FIG. 11

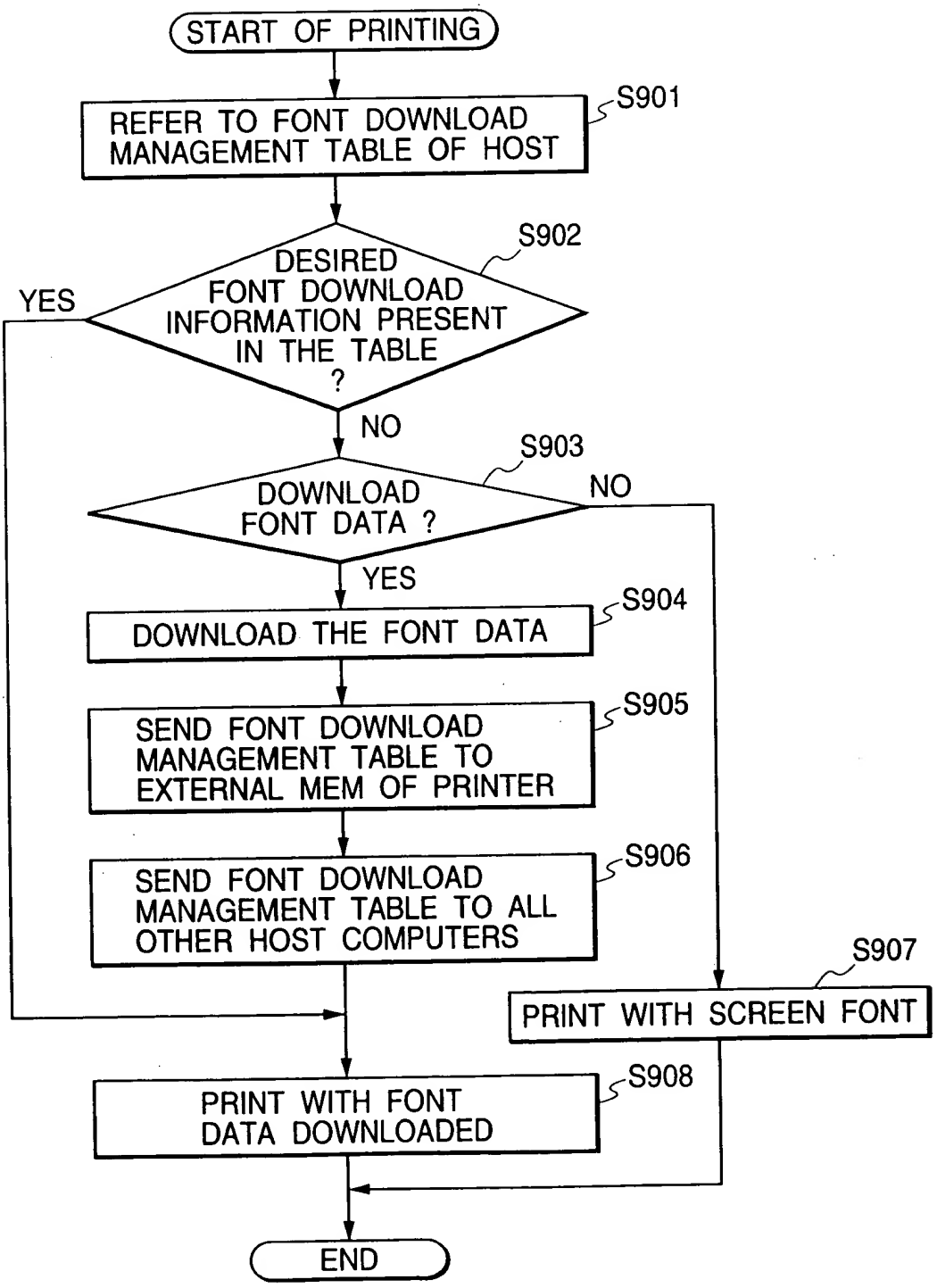

START OF PRINTING
REFER TO FONT DOWNLOAD MANAGEMENT TABLE OF HOST
S901
DESIRED FONT DOWNLOAD INFORMATION PRESENT IN THE TABLE ?
S902
YES
NO
DOWNLOAD FONT DATA ?
S903
NO
YES
DOWNLOAD THE FONT DATA
S904
SEND FONT DOWNLOAD MANAGEMENT TABLE TO EXTERNAL MEM OF PRINTER
S905
SEND FONT DOWNLOAD MANAGEMENT TABLE TO ALL OTHER HOST COMPUTERS
S906
PRINT WITH SCREEN FONT
S907
PRINT WITH FONT DATA DOWNLOADED
S908
END

FIG. 12

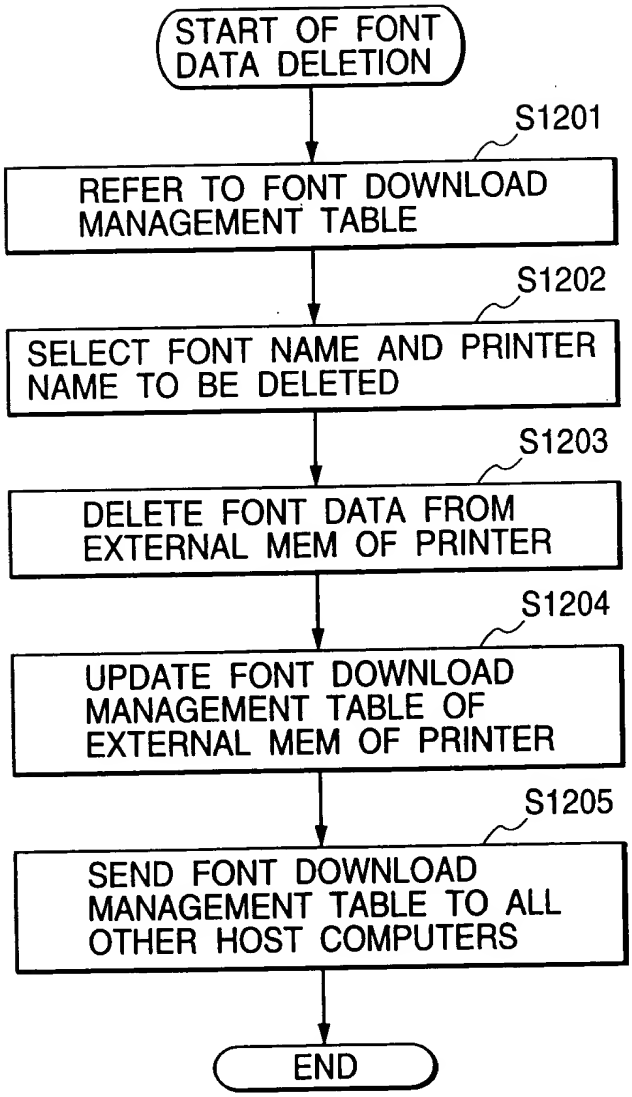
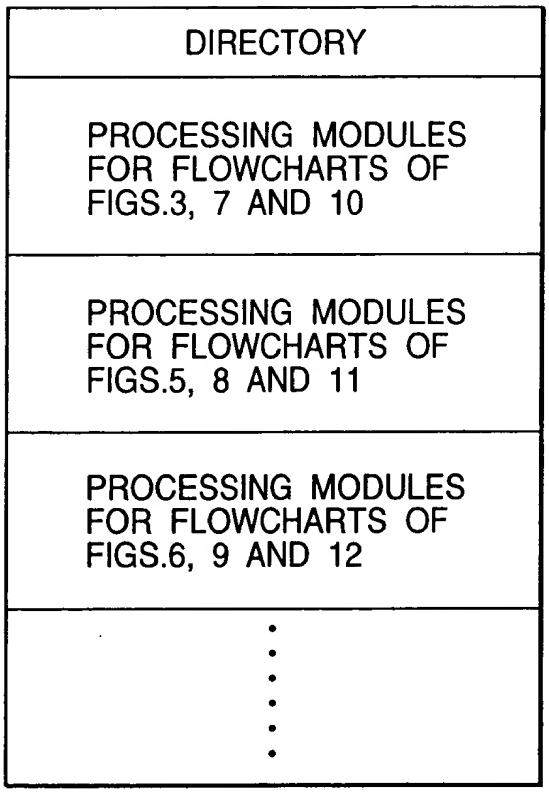

START OF FONT DATA DELETION
S1201
REFER TO FONT DOWNLOAD MANAGEMENT TABLE
S1202
SELECT FONT NAME AND PRINTER NAME TO BE DELETED
S1203
DELETE FONT DATA FROM EXTERNAL MEM OF PRINTER
S1204
UPDATE FONT DOWNLOAD MANAGEMENT TABLE OF EXTERNAL MEM OF PRINTER
S1205
SEND FONT DOWNLOAD MANAGEMENT TABLE TO ALL OTHER HOST COMPUTERS
END

FIG. 13


DIRECTORY
PROCESSING MODULES FOR FLOWCHARTS OF FIGS.3, 7 AND 10
PROCESSING MODULES FOR FLOWCHARTS OF FIGS.5, 8 AND 11
PROCESSING MODULES FOR FLOWCHARTS OF FIGS.6, 9 AND 12